Technical Report 732

Determinants of Army Career Intentions

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Manpower and Personnel Policy Research Group
Manpower and Personnel Research Laboratory

U. S. Army
Research Institute for the Behavioral and Social Sciences

November 1985

U. S. ARMY RESEARCH INSTITUTE
FOR THE BEHAVIORAL AND SOCIAL SCIENCES

A Field Operating Agency under the Jurisdiction of the Deputy Chief of Staff for Personnel

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REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER ARI Technical Report 732	2. GOVT ACCESSION NO. AD-A178 672	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) DETERMINANTS OF ARMY CAREER INTENTIONS		5. TYPE OF REPORT & PERIOD COVERED Final Report December 1984 to October 1985
		6. PERFORMING ORG. REPORT NUMBER --
7. AUTHOR(s) David K. Horne Mary Weltin		8. CONTRACT OR GRANT NUMBER(s) --
9. PERFORMING ORGANIZATION NAME AND ADDRESS U.S. Army Research Institute for the Behavioral and Social Sciences 5001 Eisenhower Ave., Alexandria, VA 22333-5600		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS 2Q162722A791 211HZ
11. CONTROLLING OFFICE NAME AND ADDRESS U.S. Army Research Institute for the Behavioral and Social Sciences 5001 Eisenhower Ave., Alexandria, VA 22333-5600		12. REPORT DATE November 1985 13. NUMBER OF PAGES 35
14. MONITORING AGENCY NAME & ADDRESS(if different from Controlling Office) --		15. SECURITY CLASS. (of this report) Unclassified 15a. DECLASSIFICATION/DOWNGRADING SCHEDULE --

16. DISTRIBUTION STATEMENT (of this Report)

Approved for public release; distribution unlimited

17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)

--

18. SUPPLEMENTARY NOTES

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19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

Motivation	Career intentions	Incentives
Factor analysis	Citizen soldiers	Polynomial logit regressions
Tour length	Career soldiers	Survey
		Army recruits

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

This research models the career intentions and choice of tour length of U.S. Army recruits. We find that the reasons for enlisting can be used to create four basic motivational factors using factor analysis. These factors, in addition to a number of demographic and socioeconomic variables, appear to be significant determinants of career intentions and choice of tour length. The qualitative response models were estimated using a polynomial logit framework. The analyses suggest that motivational factors such as reasons for enlisting

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can be successfully incorporated into empirical models to predict career choice and other behavior. The results of this study demonstrate that the factors that motivate citizen soldiers appear to differ from the factors that motivate career soldiers. The Army may be able to use this information to design incentive programs and advertising strategies to attract various groups of potential recruits.

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November 1985

Army Project Number
2Q162722A791

Manpower, Personnel, and Training

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FOREWORD

The Manpower and Personnel Policy Group of the Army Research Institute (ARI) performs research in the issues of manpower, personnel, and training of particular significance to the U.S. Army. This research analyzes the motivation of Army recruits and discusses the relationship between motivation and Army career plans.

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ACKNOWLEDGMENTS

Dr. Horne is an economist in the Manpower and Personnel Policy Research Group and Dr. Weltin is a research psychologist in the Personnel Utilization Technical Area of the Army Research Institute (ARI). The data for this research were graciously provided by Timothy Elig. The paper has benefited from discussions with Timothy Elig and Rebecca Pliske of ARI. The views expressed here are solely those of the authors and do not necessarily represent those of the aforementioned individuals, the U.S. Army, or the Department of Defense.

DETERMINANTS OF ARMY CAREER INTENTIONS

EXECUTIVE SUMMARY

Requirement:

To determine the utility of responses on the ARI Survey of Army Recruits (concerning the importance of each recruit of reasons for enlisting) in explaining service intentions and in predicting enlistment tour length.

Procedure:

The reasons for enlisting were reduced to four factors using factor analysis. The factors were interpreted as: an institutional factor, a time-out factor, a factor representing deferred gain from personal development, and an immediate gain factor. These factors were used in conjunction with demographic and socioeconomic variables to explain Army career intentions, which in turn defined citizen soldier versus career soldier status. The model was estimated in a polynomial logit framework because of the polychotomous nature of the dependent variable.

Findings:

The analysis of career intentions provides empirical evidence to support the hypothesis that citizen soldiers are more motivated by time-out and personal development factors, and less motivated by institutional factors such as desire to serve one's country or be a soldier, than are the career soldiers. Other variables are also significant, including AFQT score, education, race, sex, and age. The factors were also used to predict tour length, but were less successful. Tour length choice is confounded with choice of MOS. Two-year MOS are limited in number and eligibility requirements are imposed on recruits taking the two year option.

Utilization of Findings:

The analysis suggests that compensation packages, training opportunities and advertising may be developed to influence the composition of citizen versus career recruits and to target demographic groups in the recruiting market.

DETERMINANTS OF ARMY CAREER INTENTIONS

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DETERMINANTS OF ARMY CAREER INTENTIONS

INTRODUCTION

Some of the most important career decisions are often made early in life. Early work experience, the amount and quality of schooling and the amount of training all affect job opportunities in the future. The impact of schooling, training, and work experience on earnings have been studied extensively. Most analyses of career decisions have been done ex post facto, comparing actual earnings with decisions made in the past, e.g., the effect of college on earnings. The advantage of studying career intentions is that contemporaneous data such as current values and attitudes as well as socioeconomic status can be analyzed. Such factors, particularly values and attitudes, are generally excluded from empirical analysis because the data are unavailable.

Those socioeconomic variables which do significantly affect career choices may work through several channels (e.g., Schmidt and Strauss, 1975). Variables such as parents' education, for example, may affect values and attitudes of youths. Parents' background may also influence the amount and type of information on careers received by youths, as well as educational and work opportunities. Children may be most knowledgeable about the occupations of their parents, and that information as well as the professional contacts of parents may be important determinants of the childrens' career choices. If some of the important attitudinal and value variables can be explicitly included in the analysis, the size of the direct impact of the socioeconomic variables should fall.

This analysis of career intentions is directed at increasing our understanding of how career decisions are made. We utilized a survey of Army recruits which has been matched with data from personnel files to provide

additional information. The recruits were queried about motives for enlisting, future career plans, and information pertaining to the recruit's background. These youths were on average 18 or 19 years old, and were generally just beginning full time participation in the labor market.

The choice of the military is in many ways atypical of other labor market alternatives. Recruits sign up for tours which may range from two years in the Army to as much as six years in the Navy or Air Force. The decision to enlist can be a long-term commitment. Many recruits do eventually leave before the end of the tour, and this attrition problem is costly to the services. However some turnover is expected, since at least some recruits are unlikely to be suited to military life. Some proportion of recruits have never finished high school, nor have had any work experience. Their commitment to such a long term tour is tenuous at best.

A minority of persons who enlist in the military intend to make the military a career. Many intend to go to college or vocational school after completion of the first term, using the educational benefits earned in the service. Others hope to apply skills learned in the service to jobs in the civilian labor market. Thus, while the sample may not be completely representative of the entire youth population, the recruits do have a wide range of career intentions.

This research should be of particular interest to the Army and the other services. First, the research identifies the motives of different categories of recruits. The motives of those who plan to make the Army a career, for example, are significantly different from those of recruits who plan to leave after the initial tour. With an understanding of these motivational differences, the Army can target advertising to these groups and possibly influence the mix of career versus single tour soldiers if desired. The Army may also be able to emphasize values which might have an impact on the motives of recruits. By emphasizing

those aspects of the military which are attractive to potential career soldiers, the Army may be able to enlist more well-qualified career soldiers.

Career intentions are also likely to influence the tour length chosen by recruits. We investigate the impact of career intentions, motivational patterns and socioeconomic variables on the choice of tour length.

CAREER VERSUS CITIZEN SOLDIERS

Military service is different from most occupations. Janowitz (1960) stressed this point in his seminal work on the soldier-ethic, writing that "particularly in a free enterprise, profit-motivated society, the military establishment requires a sense of duty and honor to accomplish its objective" (p.33). Such motivations are essential in military service because of the actual and potential sacrifices required of soldiers. It is not surprising that Janowitz found that many a military officer sees his career as filling some special mission, rather than as just a job. While Janowitz apparently defined professional soldiers in terms of officers, most of his characterizations can be aptly applied to career enlisted soldiers.

The distinction between military service and civilian occupations has become somewhat obscured as military service in the volunteer force has come to be viewed as one choice from among a number of alternative careers. To recruits who do not plan a military career, the service may be an opportunity to learn skills, earn money, obtain educational benefits or travel. The military services market themselves by emphasizing the value of such benefits. This trend is promoted by the specialized training given soldiers as the military establishment uses increasingly sophisticated technology. It is likely that soldiers identify with their occupational specialty, which facilitates

comparisons with similar jobs in the civilian sector. Janowitz (1960) argued that "Indeed, the impact of the technological developments during the last half-century has had the consequence of "civilianizing" the military profession and blurring the distinction between the civilian and the military (pp. 31-32)." The rate of technology development has only accelerated in recent years.

It is reasonable to suppose that individuals who consider military service also consider alternative careers. Comparisons are made on the basis of numerous factors; compensation, security, training, lifestyle, risk, and social status are some of the more obvious factors. Those individuals who perceive military service as a special contribution or duty and who view service as having higher social esteem may be more likely to consider a career in the military. Nonpecuniary benefits are important in a wide range of job choices. Many instances are known in which people choose careers which involve financial sacrifice. It is well known, for example, that a Ph.D. may require considerable investment in time and money, yet yield a negative return. To model military service choice as an occupational choice does not exclude nonpecuniary factors in any way.

THE OCCUPATIONAL MODEL

The occupational model can be specified concisely assuming that the individual chooses that career path which maximizes his or her utility, where the utility function of individual i is specified as:

$$U_{ij} = U_{ij}\ (y,x),$$

where y is a measure of the discounted compensation stream, (including pay, bonuses, and benefits) and x represents the nonpecuniary characteristics of the job alternative j. Some pecuniary job aspects, such as training, could be

expected to affect financial return in future years. The career paths are evaluated with respect to the utility they provide to individuals, with the individual choosing the career path with the highest utility.

Holding other things constant, it is reasonable to expect that an increase in compensation increases the utility of the career path, such that
If military compensation increases, the model predicts that enlistment should rise. This does not mean that other variables are unimportant, or that
There is reason to be interested in the impact of one variable on enlistment, reenlistment and attrition, holding other variables constant. Nonpecuniary attributes are not as easy to specify. However, if working conditions for the job alternative j improve, then as well and the probability of an individual choosing that alternative increases.

This paper distinguishes between categories of recruits based on their career intentions. Those recruits who intend to reenlist at the end of the first term or who are contemplating an Army career are called career soldiers. Citizen soldiers are soldiers who intend to leave after one tour of service. In this paper we distinguish between career and citizen soldiers on the basis of expressed intentions, since the object of the analysis is the new recruit.

The career intentions of new recruits differed according to the length of tour selected. Table 1 illustrates the uncertainty recruits have about future career plans. When recruits were asked about their plans following the first term, 36 percent responded that they "don't know." Approximately 18 percent of the sample planned to pursue a career with the Army, while 46 percent planned to leave the Army after the first tour. Of those who planned to leave, just over one third intended to work, with the rest intent on attending college or pursuing vocational training.

At first glance, stated career plans did not appear to affect the choice of tour length. Twenty percent of the college-bound group elected the 2-year tour, relative to percentages ranging from 3.6 for the Army career group to 7.5 for those who intended to obtain vocational training. The majority in each group chose the three-year tour, which is the standard tour offered by the Army. Two-year tours are limited to hard-to-fill jobs, while 4-year tours are required for jobs that require lengthy training.

TABLE 1

CAREER INTENTIONS OF ARMY RECRUITS
BY FIRST ENLISTMENT TOUR LENGTH

CAREER INTENTIONS (COLUMN PERCENT)	TOUR LENGTH IN YEARS			
CIVILIAN WORK	62 (5.9)	592 (56.7)	391 (37.4)	1045
COLLEGE	319 (20.0)	807 (50.7)	466 (29.3)	1592
TRAINING VOCATIONAL	27 (7.5)	214 (59.8)	117 (32.7)	358
REENLISTMENT	36 (4.7)	505 (65.3)	232 (30.0)	773
ARMY CAREER	52 (3.6)	810 (55.4)	600 (41.0)	1462
DON'T KNOW	139 (4.7)	1679 (56.5)	1153 (38.8)	2971
TOTAL (ROW PERCENT)	635 (7.7)	4607 (56.2)	2959 (36.18)	8201 (100.0)

1983 Survey of Army Recruits

The analyses which follow investigate the determinants of career intentions as well as the choice of tour length. The empirical analysis begins with a study of the reasons for enlisting in the Army.

THE SAMPLE FACTOR ANALYSIS

New recruits who entered the Army in 1983 responded to survey questions asking about reasons for enlisting. The survey design and the sampling procedure are documented in Elig and Johnson (1984).

The survey consisted of 8,605 non-prior service recruits from all the U.S. Army reception stations across the country during the spring and summer of 1983. By matching surveys responses to official enlistment records, we could identify which respondents had enlisted for 2, 3, or 4 year tours, and relate their reasons for enlisting to the enlistment choice they had actually made. The primary advantage of this data set is that it includes enlistment motives, as well as contemporaneous attitude and socioeconomic data.

Reasons for Enlisting

Recruits were asked to rate how important each of fifteen reasons for enlisting were in their decision to enlist. The possible reasons were:

1. I enlisted because I was unemployed and I couldn't find a job.
2. I enlisted to give myself a chance to be away from home on my own.
3. I enlisted because the military will give me a chance to better myself in life.
4. I enlisted because I want to travel and live in different places.
5. I enlisted to get away from a personal problem.
6. I enlisted because I want to serve my country.
7. I enlisted because I can earn more money than as a civilian.
8. I enlisted because it is a family traditional to serve.
9. I enlisted to prove that I can make it.
10. I enlisted to get trained in a skill that will help me get a civilian job when I get out.

11. I enlisted because I can get money for a college education.
12. I enlisted because I want to be a soldier.
13. I enlisted to get
14. I enlisted for the physical training and challenge.
15. I enlisted to take time out before deciding what I really want to do.

Respondents could indicate how important each of these reasons was in their decision to enlist be marking one of these response options:

A) Not at all important
B) Somewhat important
C) Very important
D) I would not have enlisted except for this reason.

In order to reduce this set of 15 reasons to a smaller set that would relate to the notion of occupational and institutional motivational patterns, the responses were subjected to factor analysis. Although the responses to these questions were multinomial in character, they were treated as approximations to interval level data. The absolute importance of each reason is demonstrated in Table 2, generated from Elig et al., (1984, Vol 1).

Maximum likelihood factor analysis was chosen for these data because it estimates the communalities iteratively, maximizes the canonical correlations of the factors with the variables, is scale free, and provides significance tests for the number of factors. Squared multiple correlations were used as the initial communality estimates and then were iterated to convergence. Previous research (e.g., Pliske, Elig and Johnson, 1984) suggested that four factors were adequate to capture most of the common variance in the set of questions about reasons for enlisting. Therefore, we specified a four factor solution and rotated the four factors using a varimax rotation. The resultant factor loadings are shown in Table 3.

Table 2

Importance of Reasons for Enlisting

Percent of Sample

Reason	Most Important	Very Important	Somewhat Important	Not Important	Total*
To be a soldier	4.4	24.1	41.0	30.4	100.0
To serve my country	4.8	40.4	40.9	13.8	100.0
Physical Training	5.0	36.5	41.0	17.6	100.0
To gain respect of others	2.2	18.0	37.9	42.0	100.0
To prove I can make it	3.9	29.6	36.0	30.5	100.0
Family tradition to serve	1.9	6.3	21.1	70.7	100.0
To be away from home	2.7	21.3	40.4	35.6	100.0
Time to decide what to do	3.2	15.7	29.6	51.5	100.0
Personal problems	2.2	3.9	11.9	81.9	100.0
To travel	3.6	26.3	42.3	27.8	100.0
Chance to better myself	9.9	60.7	20.9	8.5	100.0
Skill training	13.2	43.1	23.7	20.0	100.0
Money for college	13.2	35.0	26.4	25.4	100.0
Unemployed	4.8	15.7	25.8	53.7	100.0
To earn more money	3.8	20.8	34.4	41.0	100.0

a. Would not have enlisted except for this reason.
* Numbers may not sum due to rounding.

Table 3

Item-Factor Correlations

Reasons for Enlisting

Reasons				
To be a soldier	77*	0	-7	-7
To serve my country	63*	-4	9	-8
Physical training	54*	18	21	0
To gain respect of others	47*	25	5	20
To prove I can make it	41*	32	16	19
Family tradition to serve	25	21	-15	10
To be away from home	15	49*	17	10
Time to decide what to do	4	46*	8	3
A personal problem	-3	39*	-13	10
To travel	23	33*	27	0
Chance to better myself	41*	-4	48*	4
Skill training	2	-7	42*	32
Money for college	0	13	35*	-1
Unemployed	-6	7	-5	47*
To earn more money	8	13	11	44*
Proportion of Variance explained by each factor	.58	.21	.13	.08

Note: N = 5089

*Values greater than .32 have been starred. Correlations are multiplied by 100 and rounded to the nearest integer.

The first factor describes a cluster of reasons for enlisting that relate to Moskos' notion of institutional values (e.g., Moskos, 1978). The highest loadings for this factor are for the reasons, "I want to be a soldier"; "to serve my country"; and "for the physical training and challenge". The second factor is defined by the reasons "to get time to decide what I want to do"; "to be away from home"; "to escape a personal problem", and "to travel". This factor might be summarized as the need to escape some hardship in civilian life or the need for a hiatus in career pursuits. The third factor which accounts for about 13% of the common variance in the factor matrix includes the desire for "a chance to better myself", for "skill training", and for "money for college". The fourth factor is clearly economic: to "make more money" than as a civilian and to avoid unemployment. Skill training also loads on this factor, and there are low negative loadings for the patriotic motives prominent in Factor 1. These two factors (Factor 3 and Factor 4) together suggest occupational values, i.e., the person is using military service as a means to an end that exists outside military service after the enlistment tour is completed. Note that military occupational specialties (MOS) for which extensive skill training is offered usually require a four year enlistment contract while MOSs that provide special Army College Fund benefits are available (with increasing dollar incentives) for two, three, and four year tour lengths.

Factors 3 and 4 describe economic motives for enlisting, while Factor 2 describes neither an institutional nor an occupational value but a desire to use the military tour as a "time-out period", or a means of getting away from something else.

The factor analysis demonstrates that the responses to the reasons for enlisting question exhibit a high level of multicollinearity. For example, the "chance to better myself" response by itself is ambiguous. The responses to this

question are correlated with desire for skill training and money for college. These three categories combine to form factor 3. However, the "chance to better myself" is also correlated with responses which comprise factor 1. The responses to these "reasons for enlisting" questions, by themselves, may provide confusing information on motives for enlisting because of the high degree of collinearity between questions. The factor analysis condenses these responses to provide information on the structure of motivations underlying the responses to the survey questions.

Career Intentions

A second question from the survey offered another approach to operationalizing the institutional/occupational differences in motivational patterns. The survey had asked: What do you think you will do after this enlistment: Leave the Army to find civilian employment; Leave the Army to attend college; Leave the Army for civilian vocational/technical education; Reenlist, but probably not make the Army a career; Stay in the Army until I retire; or I do not know. These responses were grouped into stay/leave/don't know categories corresponding to the different career plans of those who see the Army as a career, those who see it as a temporary job, and those who are undecided.

In the second stage of analysis, we attempted to test the concepts of institutional and occupational motives for enlisting by using the factor scores derived from the earlier factor analysis. These factor scores were used to predict the choice of enlistment tour length. Presumably, people who have occupational motives for enlisting, who want to earn more money or accumulate funds for college, would be more likely to minimize the length of time they are willing to commit to the Army. They would choose the two-year enlistment tour so that they could finish their service contracts quickly and return to civilian life, having fulfilled their "citizen soldier" obligation in exchange for

economic compensation. Conversely, those who hold institutional values, such as feelings of altruism and the desire to serve their country, are more likely to enlist for longer tours. These are the career soldiers for whom the military offers an unique way of life with group norms and values consonant with their own.

CAREER CHOICE

The relative importance of motivations for enlisting varies across individuals. The hypothesis tested here was whether there was any systematic difference in motives between career and the citizen soldiers. We expected that those who contemplated an Army career would be more motivated by institutional factors, while the economic factors and the chance to get away would be stronger motives for citizen soldiers. This section empirically tests that hypothesis.

The traditional method for identifying predictions that maximize the distinctions between two groups is discriminant analysis, but this approach yields inconsistent parameter estimates for non-normal data (e.g., for dichotomous data) as is used here. Because the factor scores and the dummy dependent variables have non-normal distributions, we chose instead to use a multinomial logit regression since Maddala (1983) has shown that the logit will provide more robust estimates with non-normal data. The dependent variable, career choice, is categorized as (a) career soldiers (the reference group), (b) citizen soldiers who plan to pursue school, vocational training, or civilian employment after the first term, and (c) those who responded "don't know" to the question about future plans. The factor scores and several demographic variables expected to influence career choice from a labor market perspective were included as independent variables in the equation.

A number of socioeconomic and psychological factors were included as explanatory variables in the regression. There is reason to be interested in the impact of one variable on enlistment, reenlistment and attrition, holding other variables constant. Household income (as a proxy for family's economic status) was used to create a dummy variable, equal to zero below the median reported income and equal to one for income above the median. The other predictor were: sex (male = 1) race (white = 1); years of education, age of the recruit when the enlistment contract was signed, Armed Forces Qualification Test (AFQT) score; ease of securing a full-time job in one's hometown (difficult = 1); and the factor scores described previously. The factors, in order, were: institutional values; time-out; deferred gain from investment in skills or personal development; and immediate financial gain. Excluding missing observations, there were 4,650 observations used in the analysis.

The results of the multinomial logit equations are displayed in Table 4. Because the comparison between career and citizen soldiers is of primary interest, the career soldier group is defined as the reference group. The coefficients of the citizen soldier group can be interpreted in terms of sign and size of effect compared relative to the reference group (those who intend to make the Army their career). The AFQT score, years of education, race, sex, age at contract, and three of the motivation factors were significant at the .05 level or better in at least one of the equations. The "income" and "difficulty of finding employment" dummy variables were significant at the .10 level. The story told by the equations is mostly consistent with our hypotheses. Citizen soldiers, relative to those with career expectations, are more likely to be white, male, younger, have more education and higher AFQT scores, and find it easier to obtain employment. The job opportunities and potential earnings for this group may be relatively good in the civilian market.

The factor effects are also consistent with this hypothesis. This group of citizen soldiers is less motivated by institutional factors than is the career soldier group as the impact of factor 1 is negative and significant. These recruits are motivated more by factor 3, which is the skill training/college money development factor, and by factor 2, the time-out factor. Coefficients for both are positive and significant. This result supports the hypothesis that there are motivational differences between recruits who expect to stay and those who expect to leave the service. The career soldiers are more motivated by institutional values and less motivated by purely economic values. It is appropriate to note here that these coefficients reflect relative differences in motivations. The career soldiers are less sensitive to changes in economic incentives that are the citizen soldiers. However, this analysis does not suggest that career soldiers are <u>insensitive</u> to such incentives.

The second comparison group is the "don't know" (DK) group. This group is of interest because these new recruits are undecided about their long-term career goals. When they first enlist, the Army may be able to influence their decision to make this first tour a career commitment. This group tends to have motivational patterns similar to those of citizen solders. The DK group is less motivated by institutional values compared to the career group, but more motivated by economic development and time-out factors. These soldiers are also more likely to be white.

Table 4

Career Intention Equations

Estimates for Citizen Soldier Group (N = 1,284)

VARIABLE	COEFFICIENT	T-RATIO
INTERCEPT	-1.86005	-3.26
AFQT	0.010978*	4.61
INCOME	-0.121570	-1.41
JOB DIFFICULTY	-0.171320	-1.86
EDUCATION	0.294502*	6.36
RACE	0.406466*	4.21
SEX	0.290807*	2.11
AGE	-0.131983*	-7.63
FACTOR1 (institutional)	-0.935209*	-18.86
FACTOR2 (time-out)	0.429568*	7.44
FACOTR3 (deferred gain)	0.397665*	6.60
FACTRO4 (immediate gain)	0.057389	0.86

Estimates for Don't Know Group (N = 1734)

VARIABLE	COEFFICIENT	T-RATIO
INTERCEPT	-0.786817	-1.48
AFQTSCR	-0.002575	1.14
INCOME	-0.144081	-1.7
JOB DIFFICULTY	-0.026539	-0.30
EDYRS	0.053812	1.31
RACE	0.823532*	0.53
SEX	0.068925	0.53
AGEATCON	0.005057	0.36
FACTOR1 (institutional)	-0.532701*	-11.67
FACTOR2 (time-out)	0.186498*	3.37
FACTOR3 (deferred gain)	0.318526*	5.49
FACTOR4 (immediate gain)	0.032017	0.50

LOG-LIKELIHOOD.	-4710.1
CHI-SQUARED	723.16
DEGREES OF FREEDOM USED	22
SIGNIFICANCE LEVEL FOR TEST	0.10000E-06
NUMBER OF OBSERVATIONS.	4650

Reference group is Career Soldier Group

* Significance at .05 level

TOUR LENGTH CHOICE

Most Army recruits choose the three year option, with the four year tour being the next most frequently chosen option. The availability of various tour lengths is limited by the Army, the three year tour being standard unless the applicant's choice of occupational specialty offers a two or a four year tour. About 20 percent of those who plan to attend college sign up for the two year option, while only 6 percent of those recruits who intend to work in the civilian market after the first tour choose the two year tour (see Table 1).

However, recruits do not directly choose the length of tour they desire. Instead, recruits choose an occupation associated with a predetermined tour length. The occupations that normally are assigned a two year tour are those that require relatively little training. The shorter two year tour is used as an incentive to attract more high quality recruits into shortage jobs. Many of the combat MOS's, for example, have tow year tours. In addition, these jobs have specific entry requirements for recruits, i.e., applicants must be high school graduate males who score in the upper half of the AFQT score distribution.

The hypothesis of interest here is to test whether career intentions relate to the choice of tour length. Previous research (e.g., Gade et al., 1984) has linked the concept of the citizen and career soldier to the length of tour chosen by the recruit. Those who choose the two year tour are assumed to be citizen soldiers, while three and four year recruits are assumed to be career soldiers. However, the data in Table 1 demonstrated that the majority of citizen (single tour intentions) is not a good single predictor of tour length. The choice of tour length is limited by recruiting incentives, the limited number of two year MOSs, and other restrictions. Tour length is just one of several important criteria in the choice of training MOSs. However, the length of the tour is more

important to some groups than to others. For instance, proportionately more college-bound soldiers choose the two year tour. We would expect that there should be a difference (between citizen and career soldiers) in the proportion of two and four year enlistment tours. In order to look at the factors that influenced the choice of tour length we regressed tour length (two, three or four years) against career and citizen soldier intentions, as well as the other variables included in the first regression equations. The results of the regression are illustrated in Table 5.

The top part of table shows the parameter estimates for those who enlisted for the two year tours. The bottom half of the table shows the estimates for those who chose the four year tour. Each is being compared to a reference group composed of those recruits who enlisted for three years because this is the standard tour length in the Army.. The explanatory variables included are: citizen soldier and career intentions status, AFQT score, income group, difficulty finding a job, years of education, race, sex, age at time of contract, and the four factor scores.

The variables which were statistically significant at the .05 level in the two year recruit equation include citizen soldier status, AFQT score, years of education, sex, age at contract and two of the factors. The equation suggests that the two year recruits are more likely to: be citizen soldiers, score higher on the AFQT, have more education, be younger, be male, and be more motivated by the time-off factor but less motivated by the immediate economic factor. These effects are generally consistent with the intent behind the two year tour option. The two year enlistment tour is an option only available to high school graduates who score in the upper half of the AFQT score distribution. This accounts for the strong positive effect of years of education and AFQT score. It is also

Table 5

Tour Length Equations

Estimates for Two Year Tour Enlistees (N = 611)

VARIABLE	COEFFICIENT	T-RATIO
INTERCEPT	-8.440533	-9.38
CAREER	-0.077483	-0.36
CITIZEN	0.960816*	5.97
AFQT	0.044761*	10.92
INCOME	0.208406	1.57
DIFFICULTY	0.251480	1.70
EDUCATION	0.584974*	6.96
WHITE	0.155496	0.84
SEX	0.489485*	2.20
AGE	0.245873*	-6.56
FACTOR1 (institutional)	-0.127206	-1.5
FACOTR2 (time-out)	0.183799*	2.05
FACOTR3 (deferred gain)	0.016183	0.17
FACTOR4 (immediate gain)	-0.395731*	-3.67

Estimates for Four Year Tour Enlistees N = 1,498

VARIABLE	COEFFICIENT	T-RATIO
INTERCEPT	-4.982358*	-9.33
CAREER	-0.180453*	-2.01
CITIZEN	-0.321740*	-3.80
AFQT	0.021264*	10.00
INCOME	0.081797	1.11
DIFFICULTY	0.119974	1.49
EDUCATION	0.493409*	11.06
WHITE	0.095286	1.07
SEX	0.108427	0.93
AGE	-0.139079*	-9.04
FACTOR1 (institutional)	0.105808*	2.46
FACTOR2 (time-out)	-0.083307	-1.67
FACTOR3 (deferred gain)	-0.116606*	-2.22
FACTOR4 (immediate gain)	-0.113696	-1.93

LOG-LIKELIHOOD.	-3266.2
CHI-SQUARED	687.55
DEGREES OF FREEDOM USED	26
SIGNIFICANCE LEVEL FOR TEST	0.10000E-06
NUMBER OF OBSERVATIONS.	4007

* Significant at the .05 level

Reference group is Three Year Tour Enlistees

reasonable to expect that those recruits who join the service to get educational benefits would be more likely to want short tours, while those who want skill training or who plan to stay in the Army for more than one tour would not have the incentive to take the two year option.

Four year recruits cannot be categorized strictly either as career soldiers or as citizen soldiers. Compared to three-year recruits, they score higher on the AFQT, have more education and are younger at the time they sign an enlistment contract. They are less motivated by the immediate economic incentives such as earning more money and avoiding unemployment. The four year recruits in many ways resemble the two year recruits more than they resemble the three year recruits. Both two and four year tours are non-standard, and the recruits are likely to choose these tours only if they have specific reasons such as desiring training or money for college.

The impact of the factors on tour length is not as strong as the impact on career intentions analyzed in the previous section. The institutional factor has an effect which increases with tour length; a longer tour is associated with stronger institutional motivation. Just the opposite is true for the time-out factor. Recruits motivated by this factor are more likely to choose shorter tours. Factor three is also associated with shorter tours, indicating that recruits who desire skill training, money for school or the chance to better themselves plan to return to civilian life relatively more quickly. These recruits appear to view the Army as a means to improve their position in the civilian world. Finally, factor four has a negative influence on both two and four year recruits. Recruits who are interested in immediate economic gain (higher pay or avoiding unemployment) generally choose the standard three year tour. These recruits may be less interested in obtaining skills or educational benefits and may be more willing to take the MOS with the standard tour.

Surprisingly, citizen and career soldiers are less likely to sign up for four years than are soldiers uncertain of future plans. Perhaps this is because those who are undecided about their future career plans are more attracted to skill training incentives which will allow them either to stay in the Army or to find a good job in the civilian world after their first tour. Relative to the three year recruits, four year recruits tend to be younger, brighter, and more educated. They are relatively more motivated by institutional factors and less motivated by economic factors, holding career plans constant. Since enlistment motives influence career intentions as well, the total effect of motives on enlistment tour may be quite different from the direct effect shown here. It is not surprising that the immediate economic gain factor is negative for this group.

CONCLUSIONS

The analysis of career intentions provides empirical evidence in support of the hypothesis that career soldiers are more motivated by institutional factors and less motivated by economic or time-out factors than are the citizen soldiers. Those enlistment motives rated highly for career soldiers include: to be a soldier, to serve his or her country, and to benefit from physical training and challenge.

Alternatively, the citizen soldiers and those recruits who are uncertain of their plans appear to be less motivated by the institutional factor, while the time-out and deferred economic factors are more important. The deferred economic factor appears to reflect a desire for investment in human capital (job skills, education, to "better myself") which will be valuable in the civilian sector.

The immediate economic factor to avoid unemployment or earn more money is not a significantly stronger motivation for either group of soldiers.

One must be cautious with interpretation of these results. The coefficients of the regression equations demonstrate relative importance, not absolute importance. One cannot conclude that institutional factors are unimportant to recruits who plan to serve a single tour of military service, nor does it mean that the Army career plans of recruits are completely insensitive to economic factors. The actual reported importance of the reasons for enlisting are provided in Table 2. But there are significant relative differences in the strengths of these factors across individuals, and this variation appears to be systematic. In the sample almost 27 percent of the recruits are categorized as career soldiers. We have no information on whether those who do ultimately stay in the Army are from this group, or whether intentions at the point of enlistment have any relation to actual decisions at the end of the tour. We are currently studying this question.

The determinants of tour length choice are more difficult to determine, because the tour length interacts with the job (MOS) training chosen. In addition, the two year option is a relatively small program, the size of which is limited by the Army. Nevertheless, this analysis identified a number of significant variables which influence the probability of signing for two, three or four years. Those who enlist for two or four years tend to have higher AFQT scores, are younger, and are more likely to be white compared to the three year recruits. They also appear to be motivated less by the need to take time-out and to be influenced less by economic factors. The longer the tour length chosen by the recruit, the more important are the institutional motives. Citizen soldiers are more likely, and career soldiers are less likely to sign up for the four year tour than are those soldiers who are still undecided about future job intentions.

Several policy implications of this research emerge. Most obvious is the fact that if the Army advertising emphasizes economic benefits and money for college, or "time-out" factors, the individuals most likely to be attracted are the citizen soldiers. On the other hand, marketing which emphasizes the institutional values of duty, honor, patriotism, and the challenges of being a soldier, is likely to attract the career soldiers. Further research is needed to determine whether the career intentions of these soldiers are in fact reflected in their subsequent behavior.

The previous analysis sheds light on the determinants of career intentions. Economic models often specify labor models in terms of socioeconomic variables without reference to psychological variables such as underlying motivations. This is perhaps reasonable when the data does not contain information about motives or other attitudinal data. However, this analysis has demonstrated that, for a large sample of Army recruits, the underlying motives for joining the Army are significant determinants of both career intentions and of tour length despite the organizational constraints on the choice of tour length. Underlying motivational patterns may be the missing variable in analyses of career choice.

The Army compensation package is also likely to affect the supply and mix of recruits. Current compensation is heavily weighted towards deferred compensation in the form of retirement and educational benefits. The structure of military compensation has implications in terms of efficiency and equity which have not been fully addressed in the manpower literature. For example, recruits who are high school graduates and score in the top 50th percentile of the AFQT are eligible for benefits (such as educational benefits in the Army College fund) which are closed to other recruits. This program not only rewards soldiers unequally for similar work, but also motivates a smaller group: bright graduates intending to pursue further formal education. It is likely that deferred,

potential compensation has limited impact on the decisions of 18 year-olds, who may have little knowledge about such benefits. However, this form of compensation may influence the types of individuals who apply to the Army.

The analyses demonstrate that the deferred benefits of training and money for college are relatively more attractive to citizen soldiers and the group that is unsure of future plans. Immediate economic benefits are equally important to all three groups. The institutional factors are most important to the career soldiers, while the time-out factor is less important for this group. Both the Army's advertising and the structure of compensation may be used to affect the type of soldiers recruited, which in turn will influence the structure of the force in later years. The analysis suggest that the Army College Fund (which provides deferred educational benefits) should be successful in attracting citizen soldiers, particularly in conjunction with the two year program. However, the negative impact of the deferred gain variable on career soldiers suggests that retirement benefits might not act as a major incentive for this group.

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